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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,186	03/19/2004	Werner Doetsch	038715.53337US	6767

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EXAMINER	
CHORBAJI, MONZER R	

ART UNIT	PAPER NUMBER
1797	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,186	DOETSCH ET AL.	
	Examiner	Art Unit	
	MONZER R. CHORBAJI	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,7,8 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4,7,8 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is non-final rejection is in response to the RCE filed on 9/25/09

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 4, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grimberg et al (U.S.P.N. 5,609,821) in view of Feasey et al (U.S.P.N. 5,130,053).

Regarding claim 4, Grimberg discloses a method for sterilizing foodstuff-packaging material (col.2, lines 15-20 and col.4, lines 3-5) that includes contacting the packaging material with a liquid mixture of stabilized hydrogen peroxide (col.2, lines 29-30 and col.3, lines 33-38) with foodstuff-compatible phosphonic acid (col.3, lines 14-16). Grimberg teaches that in the art of sterilizing packaging material, liquid hydrogen peroxide can either be sprayed on such material or the material is soaked in a bath containing liquid hydrogen peroxide (col.1, lines 19-30). Therefore, absent any criticality, choosing either one of the hydrogen peroxide sterilization approach is a matter of routine experimentation depending on the degree of contamination of the packaging material so that for heavily contaminated packaging material one would choose the spraying approach and for not so contaminated material one would choose soaking it in a hydrogen peroxide bath (col.1, lines 28-30).

As to the added limitation that the dip bath liquid has previously been used to sterilize the packaging material; Grimberg prefers to apply the sterilizing composition using the spraying approach (col.3, lines 60-62); however, Grimberg does not teach against using the other conventional bath approach where foodstuff packaging material are continuously submerged into a heated sterilizing liquid within the bath. As such one recognizes that at some time during the operation of the sterilizing bath machine that

the heated liquid in the bath has already been used to sterilize various foodstuff packages.

Grimberg fails to teach concentration ranges between 200 to 500 ppm of phosphonic acid.

Feasey discloses a composition of hydrogen peroxide and phosphonic acid and teaches that the concentration of phosphonic acid varies between 50 to 1000 ppm, because this concentration range of between 50 to 1000 ppm for phosphonic acid is found to be the most effective (col.7, example 5) and is further dependent on the intended use (col.4, lines 40-58). It would have been obvious to one of ordinary skill in the art at the time of the invention to widen Grimberg concentration range of phosphonic acid to a different concentration range as taught by Feasey, because this concentration range of between 50 to 1000 ppm for phosphonic acid is found to be the most effective as explained by Feasey (Feasey, col.7, example 5).

Regarding claim 7, Grimberg teaches the use of aminotrismethylene phosphonic acid (col.3, lines 14-16).

Regarding claim 11, Grimberg discloses a method for sterilizing a packaging material (col.2, lines 15-20 and col.4, lines 3-5) in aseptic packaging plants (col.4, lines 3-8) .

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimberg et al (U.S.P.N. 5,609,821) in view of Feasey et al (U.S.P.N. 5,130,053) as applied to claim 4 and further in view of Vogele et al (U.S.P.N. 4,104,024).

Grimberg teaches that it is known to apply hot liquid hydrogen peroxide to packaging materials (col.1, lines 24-27). However, Grimberg and Feasey fail to teach temperature value for the hydrogen peroxide bath.

Vogele disclose that it is known to heat hydrogen peroxide baths to a temperature of 90 degrees Celsius (col., lines 10-21). Vogele also teaches that maintaining temperature of about 90 degrees Celsius is complex and expensive as well. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify Grimberg/Feasey hydrogen peroxide bath temperature to a temperature below 90 degrees Celsius as taught by Vogele since in this temperature range all bacteria spores are destroyed (Vogele, col.1, lines 15-23).

Response to Arguments

6. Applicant's arguments filed on 9/25/09 have been fully considered but they are not persuasive.

On pages 4-7 of the Remarks section; Applicant argues that Grimberg uses a high purity hydrogen peroxide solution having a phosphonic acid concentration of less than 50 mg/kg (less than 50 ppm) in order to avoid fouling of the spraying system; that Feasey shows that the contamination of the composition affects the required concentration of the phosphonic acid; that the combination of Grimberg/Feasey does not disclose the use of a dip bath liquid which has previously been used to sterilize foodstuff packaging material and comprises 200-500 ppm of phosphonic acid since Grimberg teaches spraying articles with high purity solution of stabilized hydrogen peroxide which is not subject to contamination; that Feasey teaches using at least 1000

ppm phosphonic acid in solutions contaminated with transition metal catalysts; that Feasey uses less stabilizer in non-contaminated solutions; that one skilled in the art following the teachings of Feasey would add at least 1000 ppm of the stabilizer to the contaminated dip bath liquid in Grimberg; that one of ordinary skill in the art would not select an amount of stabilizer suitable for non-contaminated hydrogen peroxide solutions, as the 50-1000 ppm concentration of Example 5 suitable for high purity diluted hydrogen peroxide solutions; and that the disclosed concentration range of between 50 and 1000 ppm for phosphonic acid in example 5 of Feasey is not found to be the most effective.

Grimberg defines high purity as a hydrogen peroxide solution without having carbonaceous compounds and metallic impurities (col.3, lines 52-55) where the "typical" (construed as normally) concentration of the phosphonic acid is less than 50 mg/kg (col.3, lines 29-32). In addition, Grimberg does not teach employing phosphonic acid outside his disclosed range, but rather provides a range that is found suitable (in col.3, lines 29-30) for combination with hydrogen peroxide in sterilization of packaging material (col.1, lines 29-32). More specifically, Grimberg prefers to apply the sterilizing composition using the spraying approach (col.3, lines 60-62); however, Grimberg does not teach against using the other conventional bath approach where foodstuff packaging material are continuously submerged into a heated sterilizing liquid within the bath. As such one recognizes that at some time during the operation of the sterilizing

bath machine that the heated liquid in the bath has already been used to sterilize various foodstuff packages.

Feasey recognizes that the concentration of the phosphonic acid stabilizer depends on factors, such as the extent of future contamination of the solution, the pH of the solution, the extent of stabilization needed in use (col.4, lines 30-37), and the intended use (col.4, lines 45-58). More specifically, Feasey teaches that the proper concentration of the stabilizing phosphonic acid for sterilization purposes is from 50 to 1000 ppm as explained in Example 5 in column 7. It would have been obvious to one of ordinary skill in the art at the time of the invention to widen Grimberg concentration range of phosphonic acid to a different concentration range as taught by Feasey, because this concentration range of between 50 to 1000 ppm for phosphonic acid is found to be the most effective as explained by Feasey (Feasey, col.7, example 5).

As to the issue of the relationship between the concentration values of the phosphonic acid to the various different extents of liquid contamination and based on the combined of teachings of Grimberg of using high purity hydrogen peroxide solutions that requires concentrations of 50 ppm or less of phosphonic acid and the teachings of Feasey that the concentration of the phosphonic acid depends on the extent of the contamination of the solution; one would recognize increasing the phosphonic acid concentration of the high pure hydrogen peroxide solution in order to overcome the early decomposition of the hydrogen peroxide in the treatment liquid. More specifically, Feasey teaches that the amount of the stabilizer varies in general from 10 ppm to no more than 5000 ppm, but the actual amount differs for different purposes for the

composition (col.4, lines 40-46). Given the teaching that the stabilizer is useful in lens cleaning solutions up to a concentration of 1000 ppm, one of ordinary skill in the art would have been motivated to expand the range taught by Grimberg. It would have been obvious, to one of ordinary skill in the art to determine, through routine experimentation, an expanded effective range of the phosphonic acid in the method of Grimberg, given the teachings of Feasey that phosphonic acid can be used in contact lens cleaning up to an effective concentration of 1000 ppm, where problems with residue would be equally, if not more, detrimental to the human body than in food packaging.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R. CHORBAJI whose telephone number is (571)272-1271. The examiner can normally be reached on M-F 9:00-5:30.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. C./

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797